Listing of Claims

The following listing of claims will replace all prior versions, and listings, of claims in the subject application:

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1. (currently amended) A solution jet type fabrication apparatus for fabricating a wiring pattern or a device, the solution jet type fabrication apparatus comprising:

a jet head for ejecting a droplet of a solution containing conductive fine particles onto a substrate, so as to form a pattern, by vaporizing a volatile ingredient of the solution, and allowing a solid component to remain on the substrate,

wherein the substrate is made from plastic or polymer film and has no liquid absorbing property,

wherein the substrate has electrodes thereon,

wherein the jet head includes a nozzle from which the droplet is ejected onto said substrate and electrodes to connect each other, the nozzle being formed from a material that has a greater hardness than that of the fine particles in the solution,

wherein the nozzle has a size that is equal to or less than Φ20μm, the nozzle satisfying a relation of $0.0001 \leq Dp/Do \leq 0.01$, where Dp represents the diameter of each of the fine particles and Do represents the diameter of the nozzle,

wherein each of the fine particles has a size that is equal to or less than the roughness of a surface of the substrate,

wherein a thickness of the pattern after vaporizing the volatile ingredient of the solution is from the diameter Dp of the fine particle to 100μm.

wherein a distance between the fine particles in the pattern is within ten times of the diameter Dp of the particle.

2. (original) The solution jet type fabrication apparatus as claimed in claim 1, wherein the jet head ejects the droplet using a mechanical displacement force.

3. (original) The solution jet type fabrication apparatus as claimed in claim 2, wherein the jet head ejects the droplet using the mechanical displacement force so that the droplet becomes spherical immediately before the droplet reaches the substrate.

4. (original) The solution jet type fabrication apparatus as claimed in claim 2, wherein the jet head ejects the droplet using the mechanical displacement force so that the droplet has an elongated shape along the ejecting direction without a trailing droplet, and so that the length of the elongated droplet in the ejecting direction is no more than three times the length of the elongated droplet in a direction perpendicular to the ejecting direction.

5. (previously presented) The solution jet type fabrication apparatus as claimed in claim 2, further comprising:

a driving unit for moving the jet head and the substrate relatively to the other;

a substrate positioning unit for adjusting and determining the position of the substrate; and

a substrate holder for holding the substrate and keeping the distance between the

substrate and the nozzle 3 mm or less while the jet head and the substrate are moving relatively to the other.

6. (previously presented) The solution jet type fabrication apparatus as claimed in claim 2, further comprising:

a control unit for moving at least one of the jet head and the substrate relatively to the other so that that velocity of the relative movement of the jet head and the substrate is less than the velocity of the ejected droplet.

Claim 7 (canceled).

8. (original) The solution jet type fabrication apparatus as claimed in claim 1, wherein the jet head ejects the droplet using a growth displacement force of a thermally generated bubble.

9. (previously presented) The solution jet type fabrication apparatus as claimed in claim 8, further comprising:

a driving unit for moving at least one of the jet head and the substrate relatively to the other so that the velocity of the relative movement of the jet head and the substrate is no more than 1/3 of the velocity of the ejected droplet.

Claim 10 (canceled).

11. (original) The solution jet type fabrication apparatus as claimed in claim 8, wherein the jet head ejects the droplet using the growth displacement force of a thermally generated bubble so that the droplet has an elongated shape along the ejecting direction with a trailing droplet, and so that the length of the elongated droplet in the ejecting direction is no less than five times the length of the elongated droplet in a direction perpendicular to the ejecting direction.

12. (original) The solution jet type fabrication apparatus as claimed in claim 1, wherein the jet head includes a filter situated at an upstream location of the nozzle.

13. (previously presented) The solution jet type fabrication apparatus as claimed in claim 12, wherein the filter is situated at a position nearest to the nozzle for trapping a foreign particle with a size equal to or greater than 30 times the diameter of the fine particle.

Claims 14-32 (canceled).